

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) At a computer system that is network connectable to a messaging server, the computer system configured to provide user access to data stored at the messaging server, a method for requesting data that provides an improved user experience when the messaging server is experiencing increased load, the method comprising:

an act of sending a data request to the messaging server;

an act of receiving a server response including an adaptively generated wait hint, the adaptively generated wait hint being an indication that the messaging server was unable to process the data request, the adaptively generated wait hint generated by a wait hint generation algorithm, the wait hint generation algorithm configured to adaptively generate a wait hint for each attempt in a plurality of attempts to send the data request based on how many prior attempts to send the data request have occurred, up to a specified number of attempts after which the data request is processed at the message server, each wait hint including an indicated wait time indicating an amount of time the computer system is to wait before attempting to resend the data request, each wait hint generated;

an act of waiting a specified wait time ~~in accordance with the adaptively generated wait hint before resending the data request~~ to thereby reduce the load on the messaging server, the specified wait time based on the indicated wait time; and

an act of resending the data request subsequent to waiting the specified wait time.

2. (Original) The method as recited in claim 1, wherein the act of sending a data request to the messaging server comprises an act of sending a synchronization request.

3. (Original) The method as recited in claim 1, wherein the act of sending a data request to the messaging server comprises an act of issuing an RPC call.

4. (Original) The method as recited in claim 1, wherein the act of receiving a server response including an adaptively generated wait hint comprises an act of receiving a buffer from the server in response to an RPC call.

5. (Original) The method as recited in claim 4, wherein the act of receiving a buffer from the server in response to an RPC call comprises an act of receiving a buffer that includes an error code and a corresponding wait hint, the error code indicating that the server was busy.

6. (Currently Amended) The method as recited in claim 1, ~~wherein the act of waiting a specified wait time in accordance with the adaptively generated wait hint comprises further comprising:~~

an act of generating the specific wait time by randomizing the indicated specified wait time with a threshold time of the indicated wait time, the specified wait time differing from the indicated wait time such that a number of clients receiving the adaptively generated wait hint resend data requests at different times.

7. (Currently Amended) The method as recited in claim 1, wherein the act of waiting a specified wait time in accordance with the adaptively generated wait hint comprises ~~application of applying~~ the wait hint to a ~~provider-client~~ side algorithm that attempts to reduce the load at the messaging server.

8. (Original) The method as recited in claim 1, wherein the act of resending the data request subsequent to waiting the specified time comprises reissuing an RPC call that was originally issued to send the data request.

9. (Original) The method as recited in claim 1, further comprising:
an act of receiving a synchronization command from a user.

10. (Currently Amended) The method as recited in claim 1, further comprising:
an act of receiving a second server response including a second adaptively generated wait hint subsequent to resending the data request, the second adaptively

generated wait hint being an indication that the messaging server was unable to process the resent data request, the second adaptively generated wait hint having a second different indicated wait time differing from the indicated wait time;

an act of waiting a second specified wait time before again resending the data request in accordance with the second adaptively generated wait hint to thereby reduce the load on the messaging server, the second specified wait time based on the second different indicated wait time; and

an act of again resending the data request subsequent to waiting the second specified wait time.

11. (Currently Amended) The method as recited in claim 1, further comprising:

an act of receiving message related data corresponding to the data request subsequent to resending the data request; and

an act of updating a user-message interface to reflect that the message related data was received.

12. (Currently Amended) The method as recited in claim 1, further comprising:

an act of causing a user-message interface to indicate that the data request is still being processed notwithstanding that the messaging server was unable to process the data request.

13. (Currently Amended) The method as recited in claim 12, wherein the act of causing a user-message interface to indicate that the data request is still being processed comprises a message provider causing a messaging interface to indicate that the data request is still being processed.

14. (Currently Amended) At a computer system that is network connectable to a plurality of clients, the computer system configured to process client data requests for data maintained at the computer system and return appropriate data to corresponding requesting clients, a method for regulating client requests so as to provide an improved user experience when the messaging server is experiencing increased load, the method comprising:

an act of receiving a client data request from a client;

an act of determining that the computer system is unable to process the client data request, subsequent to receiving the client data request;

an act of adaptively generating a wait hint, the adaptively generated wait hint ~~representing~~ including an indicated wait time indicating an amount of time that the client is to wait ~~a specified wait time~~ before resending the client data request to thereby reduce the load at the computer system, the adaptively generated wait hint generated by a wait hint generation algorithm, the wait hint generation algorithm configured to adaptively generate a wait hint for each attempt in a plurality of attempts to send the data request based on how many prior attempts to send the data request have occurred, up to a specified number of attempts after which the data is to be processed; and

an act of sending a server response that includes the adaptively generated wait hint to the client.

15. (Original) The method as recited in claim 14, wherein the act of receiving a client data request from a client comprises an act of receiving a synchronization request.

16. (Original) The method as recited in claim 14, wherein the act of receiving a client data request from a client comprises an act of receiving an RPC call.

17. (Original) The method as recited in claim 14, wherein the act of determining that the computer system is unable to process the client data request comprises an act of determining that the computer system lacks the resources to process the client data request in parallel with other requests that are being processed.

18. (Original) The method as recited in claim 14, wherein the act of determining that the computer system is unable to process the client data request comprises an act of determining that the computer system is already processing a configured maximum number of requests that can be processed in parallel.

19. (Currently Amended) The method as recited in claim 14, wherein the act of adaptively generating a wait hint comprises an act of varying the indicated wait time between successive adaptively generated~~ing a wait hints~~ in accordance with ~~a configurable~~the wait hint generation algorithm.

20. (Currently Amended) The method as recited in claim 19, wherein the act of varying the indicated wait time between successive adaptively generating ~~a wait hints~~ in accordance with ~~the a configurable~~ wait hint generation algorithm comprises an act of ~~generating a wait hint in accordance with a wait hint generation algorithm that~~ increases the indicated wait time ~~represented by for~~ each successive wait hint corresponding to the same data request.

21. (Currently Amended) The method as recited in claim 19, wherein the act of adaptively generating a wait hint ~~in accordance with a configurable wait hint generation algorithm~~ comprises an act of generating a wait hint in accordance with a wait hint generation algorithm that accesses external configurable parameter values.

22. (Original) The method as recited in claim 14, wherein the act of adaptively generating a wait hint comprises an act of generating a wait hint for a data request based on the connection speed of the client that sent the data request.

23. (Original) The method as recited in claim 14, wherein the act of sending a server response that includes the adaptively generated wait hint to the client comprises an act of sending a buffer to the client in response to an RPC call.

24. (Original) The method as recited in claim 23, wherein the act of sending a buffer to the client in response to an RPC call comprises an act of sending a buffer that includes an error code and a corresponding wait hint, the error code indicating that the server was busy.

25. (Currently Amended) The method as recited in claim 14, further comprising:

an act of receiving a resent client data request from the client, the resent client data request requesting the same data as the client request;

an act of determining that the computer system is again unable to process the resent client data request, subsequent to receiving the resent client data request;

an act of adaptively generating a second wait hint, the adaptively generated second wait hint including a second indicated wait time indicating a second amount of time representing that the client is to wait a second specified wait time before again resending the resent client data request to thereby reduce the load at the computer system, the seconding indicated wait time differing from the indicated wait time in accordance with the configuration of the wait hint generation algorithm; and

an act of sending a second server response that includes the adaptively generated second wait hint to the client.

26. (Currently Amended) A computer program product for use at a computer system that is network connectable to a messaging server, the computer system configured to provide user access to data stored at the messaging server, the computer program product for implementing a method for requesting data that provides an improved user experience when the messaging server is experiencing increased load, the computer program product comprising one or more computer-readable storage media having stored thereon computer-executable instructions that, when executed by a processor, cause the computer system to perform the following:

send a data request to the messaging server;

receive a server response including an adaptively generated wait hint, the adaptively generated wait hint being an indication that the messaging server was unable to process the data request, the adaptively generated wait hint generated by a wait hint generation algorithm, the wait hint generation algorithm configured to adaptively generate a wait hint for each attempt in a plurality of attempts to send the data request based on how many prior attempts to send the data request have occurred, up to a specified number of attempts after which the data request is processed at the message server, each wait hint including an indicated wait time indicating an amount of time the computer system is to wait before attempting to resend the data request;

wait a specified wait time ~~in accordance with the adaptively generated wait hint before resending the data request~~ to thereby reduce the load on the messaging server, the specified wait time based on the indicated wait time; and

resend the data request subsequent to waiting the specified wait time.

27. (Currently Amended) A computer program product for use at a computer system that is network connectable to a plurality of clients, the computer system configured to process client data requests for data maintained at the computer system and return appropriate data to corresponding requesting clients, the computer program product for implementing a method for regulating client requests so as to provide an improved user experience when the messaging server is experiencing increased load, ~~the computer program product comprising one or more computer-readable storage media having stored thereon computer-executable instructions that,~~ when executed by a processor, cause the computer system to perform the following:

receive a client data request from a client;

determine that the computer system is unable to process the client data request, subsequent to receiving the client data request;

adaptively generate a wait hint, the adaptively generated wait hint ~~representing including an indicated wait time indicating an amount of time that the client is to wait a specified wait time before~~ resending the client data request to thereby reduce the load at the computer system, the adaptively generated wait hint generated by a wait hint generation algorithm, the wait hint generation algorithm configured to adaptively generate a wait hint for each attempt in a plurality of attempts to send the data request based on how many prior attempts to send the data request have occurred, up to a specified number of attempts after which the data is to be processed; and

send a server response that includes the adaptively generated wait hint to the client.

28. (New) The method as recited in claim 1, wherein receiving a server response including an adaptively generated wait hint comprises an act of receiving an adaptively generated wait hint having indicated wait time differing from the indicated wait hint time the wait hint generation algorithm is configured to generate for other attempts, in the plurality of attempts, to send the data request.